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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,967	09/11/2003	Duane G. Krzysik	KCC 4982.1 (K-C 19,834)	5034

45736 7590 06/16/2008

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EXAMINER
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SHEIKH, HUMERA N

ART UNIT	PAPER NUMBER
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1618

NOTIFICATION DATE	DELIVERY MODE
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06/16/2008

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**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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*Ex parte* DUANE G. KRYZSIK, STEPHEN BALDWIN, and  
BOZENA NOGAJ

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Appeal 2008-3449  
Application 10/659,967  
Technology Center 1600

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Decided: June 12, 2008

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Before ERIC GRIMES, LORA M. GREEN, and JEFFREY N. FREDMAN,  
*Administrative Patent Judges.*

FREDMAN, *Administrative Patent Judge.*

**DECISION ON APPEAL**

This is an appeal under 35 U.S.C. § 134 involving claims to a topical ointment which the Examiner has rejected as obvious. We have jurisdiction under 35 U.S.C. § 6(b). We affirm-in-part.

### *Background*

“Diaper rash and related skin problems are common forms of skin irritation and inflammation of those parts of an infant's or adult's body normally covered by an absorbent product such as a diaper or incontinence garment” (Spec. 1). The Specification notes that “parents have attempted to control diaper rash through the use of a topical ointment, which acts as an occlusive, barrier-type layer” (Spec. 2). According to the Specification, “[m]ost conventional topical ointments available have been in the form of a water-in-oil emulsion. The high viscosity associated with these products keeps the diaper rash ointment from being substantially washed off of the skin by urine and/or feces” (Spec. 2).

Appellants teach “topical ointments for direct application to the skin for preventing and treating diaper dermatitis and related rashes and skin ailments” (Spec. 3). Appellants teach that “the topical ointments comprise the following components: (a) an emollient; (b) a structurant; (c) a rheology enhancer; and (d) other optional components” (Spec. 3).

### *Statement of the Case*

#### *The Claims*

Claims 1, 3, 5-13, 15-23, 25, and 27 are on appeal. Claim 1 is representative and reads as follows:

1. A topical ointment comprising from about 30% by total weight of the ointment to about 80% by total weight of the ointment of an emollient, from about 20% by total weight of the ointment to about 40% by total weight of the ointment of a structurant, and from about 0.1% by total weight of the ointment to about 40% by total weight of the ointment of a rheology enhancer, wherein the rheology

enhancer is selected from the group consisting of polyisobutylene; hydrogenated polyisobutene and butylene/ethylene/styrene copolymers; hydrogenated polyisobutene and ethylene/propylene/styrene copolymers and butylene/ethylene/styrene copolymers; isononyl isononanoate and ethylene/propylene/styrene copolymers and butylene/ethylene/styrene copolymers; isododecane and ethylene/propylene/styrene copolymers and butylene/ethylene/styrene copolymers; isohexadecane and ethylene/propylene/styrene copolymers and butylene/ethylene/styrene copolymers; isopropyl palmitate and ethylene/propylene/styrene copolymers and butylene/ethylene/styrene copolymers; and combinations thereof.

*The prior art*

The Examiner relies on the following prior art reference to show unpatentability:

Morrison	US 6,340,467	Jan. 22, 2002
Grollier	US 4,925,653	May 15, 1990
Krzysik	US 6,149,934	Nov. 21, 2000
Krzysik	US 6,287,581	Sep. 11, 2001
Chung	EP 0 497 144 B1	Aug. 05, 1992

*The issue*

The rejections as presented by the Examiner are as follows:

- A. Claims 1, 3, 5-13, 15-18, 21 and 27 stand rejected under 35 U.S.C. § 103(a), as being obvious over Chung, Morrison, and Grollier (Ans. 4).
- B. Claims 1, 3, 5-13, 15-23, and 25 stand rejected under 35 U.S.C. § 103(a), as being obvious over Chung and Krzysik '934 (Ans. 10).
- C. Claims 1, 3, 5, 6, 10-13, and 19-22 stand rejected under 35 U.S.C. § 103(a), as being obvious over Chung and Krzysik '581 (Ans. 14).

*A. 35 U.S.C. § 103(a) rejection over Chung, Morrison, and Grollier*

Appellants argue that “no where in ’144 is it taught or suggested to use the combination of isododecane with the triblock ethylene/propylene/styrene copolymers, and triblock butylene/ethylene/styrene copolymers as a rheology enhancer in its cosmetic composition” (App. Br. 8).

Appellants also contend that “triblock copolymers are surprisingly superior rheology enhancers as these copolymers produce a gelled or film-forming composition, allowing the composition to easily transfer from an absorbent article such as a diaper to form a film-like barrier layer on the skin, thereby protecting the skin from water and moisture” (App. Br. 9).

Appellants argue that “[n]o where in the cited references is it disclosed to use isododecane in combination with ethylene/propylene/ styrene copolymers, and butylene/ethylene/styrene copolymers in the compositions of either the Morrison or Grollier et al” (App. Br. 11).

The Examiner responds that “[e]xample 2, at page 4, for instance, also demonstrates a cosmetic composition whereby the styrene-ethylene-propylene copolymer may be admixed with isododecane” (Ans. 6). The Examiner also contends that “Grollier amply provides motivation based on their explicit teaching of the use of polyisobutylene, which serves to increase the protection index of the sunscreen composition and protecting human epidermis against ultraviolet radiations” (Ans. 9).

The Examiner argues that “Appellants have not established any unexpected or superior results, attributable the claimed percentage of polyisobutylene” (Ans. 9).

In view of these apparently conflicting positions, we frame the obviousness issue before us as follows:

Would an ordinary artisan have reasonably combined the cosmetic components of Morrison and Grollier with the cosmetic composition of Chung?

*Findings of Fact*

1. Chung teaches “a composition suitable for use as a concealer and sunscreen” (Chung 4:26).
2. Chung teaches that the “emollient used in the composition of the invention preferably comprises from 10.0% to 90% by weight of the composition” (Chung 3:1-2).
3. Chung teaches a specific composition with 39% emollient, where 19% was isododecane and 20% was isotetracosane (*see* Chung 4, Example 2).
4. Chung teaches the incorporation of a rheology enhancer, including “a styrene-ethylene-propylene copolymer” (Chung 2:19) where “the composition contains from 1.0% to 25% by weight of the copolymer” (Chung 2:51-52).
5. Morrison teaches the use of a structurant such as solid hydrocarbon gels with “0.1 up to 50 wt. % of additional ingredients such as various hydrocarbons added solely to alter the physical properties of the gel. For example, various waxes can be added such as carnauba wax, beeswax or

candellia [sic, candelilla?] wax for the purpose of varying the melting point or softening point of the gel” (Morrison, col. 4, ll. 35-39).

6. Grollier teaches addition of polyisobutylene in a sunscreen composition which functions to “increase the protection index of the said screen composition in respect of ultraviolet radiations, as well as to the use of the said composition to protect human epidermis against ultraviolet radiations” (Grollier, col. 1, ll. 14-17).

7. Grollier teaches the polyisobutylene is present in “a proportion of 1 to 20% by weight” (Grollier, col. 2, ll. 32-33).

8. Grollier teaches that structurants such as “Sipol wax, lanolin wax, beeswax, candelilla wax, microcrystalline wax, [or] carnauba wax” can be used (Grollier, col. 8, ll. 24-26).

*Discussion of 35 U.S.C. § 103(a) rejection over Chung, Morrison, and Grollier*

Chung teaches a sunscreen ointment with an emollient and a rheology enhancer (FF 1-4). Morrison teaches incorporation of structurants into cosmetic compositions (FF 5). Grollier teaches inclusion of polyisobutylene with structurants into cosmetic and sunscreen compositions (FF 6-8).

While Appellants and the Examiner dispute whether Chung teaches a triblock copolymer as a rheology enhancer, claim 1 also states that “the rheology enhancer is selected from the group consisting of polyisobutylene” (Claim 1). Grollier teaches the addition of polyisobutylene to cosmetic compositions (FF 6-7) such as those of Chung and both Grollier and Chung are interested in sun protection (FF 1, 6).

We simply give the Markush group in claim 1 its natural interpretation, that the rheology enhancer must be 0.1% to 40% by weight of the cosmetic and that the rheology enhancer may be polyisobutylene. *See, e.g., In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000) (“During examination proceedings, claims are given their broadest reasonable interpretation consistent with the specification.”).

We agree with the Examiner that it would have been obvious to an ordinary artisan at the time the invention was made to include structurants such as the waxes taught by Morrison in the composition of Chung since Morrison teaches that the addition of waxes is useful for “varying the melting point or softening point of the gel” (Morrison, col. 4, l. 39). An additional benefit identified by Morrison is that the product “will not run or drip, particularly during periods of excessive body heat” (Morrison, col. 4, ll. 45-46), a property that would clearly be useful in the sunscreen of Chung (FF 1).

We also agree with the Examiner that it would have been obvious to an ordinary artisan to add the polyisobutylene rheology enhancer of Grollier to the cosmetic compositions of Chung and Morrison since Grollier recognizes polyisobutylene as functioning to “increase the protection index of the said screen composition in respect of ultraviolet radiations, as well as to the use of the said composition to protect human epidermis against ultraviolet radiations” (Grollier, col. 1, ll. 14-17).

Additionally, Grollier provides strong incentives to use polyisobutylene in the sunscreen of Chung, since Grollier states that because of the “remarkable adhesion of polyisobutylene to skin, on the one hand, and



of its property of reducing the transmission of water vapour, on the other hand, the sunscreen composition according to the invention has a better resistance to seawater and to swimming pool water as well as to perspiration” (Grollier, col. 2, ll. 21-28). Grollier teaches a range of polyisobutylene which falls within the claimed range for a rheology enhancer (claim 1, FF 7).

We conclude that the Examiner has set forth a prima facie case that claim 1 would have been obvious to the ordinary artisan in view of Chung, Morrison, and Grollier.

We reject Appellants’ argument that “triblock copolymers are surprising superior rheology enhancers as these copolymers produce a gelled or film-forming composition, allowing the composition to **easily transfer** from an absorbent article such as a diaper” (App. Br. 9). Because we are not relying upon teachings of copolymers for the combination, instead relying upon the polyisobutylene compound suggested by Grollier which is identical to that in claim 1, this argument is not persuasive.

We are not persuaded by Appellants’ argument that the statement of Grollier “that the addition of polyisobutylene to a skin care composition has the advantage of protecting human epidermis against UV radiation . . . without anything further, is not sufficient motivation . . . to combine the cited references and arrive at Applicants’ invention” (App. Br. 13). We think that Grollier’s statement provides a very strong motivation to include isobutylene in the sunscreen of Chung as discussed *supra*. We think that such a combination is merely a “predictable use of prior art elements according to their established functions.” *KSR*, 1727 S. Ct. at 1740.

We also do not find Appellants' argument persuasive with regard to the ranges of components required (*see* App. Br. 15). Morrison teaches an overlapping range for the structurant and Grollier teaches an overlapping range for the rheology enhancer and Chung teaches an overlapping range for the emollient (*see* FF 2, 5, 7). Appellants have not shown any evidence that any specific values in the large ranges of ointment components are critical. *See In re Woodruff*, 919 F.2d 1575, 1578 (Fed. Cir. 1990) (citations omitted)(“The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. These cases have consistently held that in such a situation, the applicant must show that the particular range is *critical*, generally by showing that the claimed range achieves unexpected results relative to the prior art range.”)

We affirm the rejection of claim 1 as obvious over Chung, Morrison, and Grollier. Pursuant to 37 C.F.R. § 41.37(c)(1)(vii)(2006), we also affirm the rejections of claims 3, 5-13, 15-18, 21, and 27 as these claims were not argued separately.

*B. 35 U.S.C. § 103(a) rejection over Chung and Krzysik '934*

Appellants argue that “no where in the '934 reference is it taught or suggested to use the rheology enhancers of claim 1 in the lotion formulation of '934” (App. Br. 17). Appellants also contend that “a close reading of the '934 reference actually teaches away from using the styrene-ethylene-propylene copolymers of '144 in the '934 lotion formulation” (App. Br. 18).

The Examiner responds that “[t]he prior art clearly recognizes and teaches a topical formulation as claimed that utilizes similar ingredients,

such as the rheological enhancing agents, emollients, structurants and the like” (Ans. 13). The Examiner also argues that “the instant claims, which are drawn to a composition, are completely silent with regards to any preferred properties attributable to the triblock copolymers, such as ease of transferring on the skin to provide improved skin health” (Ans. 13).

In view of these apparently conflicting positions, we frame the obviousness issue before us as follows:

Would an ordinary artisan have reasonably combined the cosmetic components of Krzysik ‘934 with the cosmetic composition of Chung and would that combination have resulted in the composition of claim 1?

*Findings of Fact*

9. Krzysik ‘934 discloses lotion formulations comprising emollients, structurants such as wax and viscosity enhancers (*see* Krzysik ‘934, col. 9, ll. 31-41).

10. Krzysik ‘934 teaches a “lotion formulation [that] may include from about 5 to about 95 weight percent of an emollient, from about 5 to about 95 weight percent of a wax and from about 1 to about 25 weight percent of a viscosity enhancer based on a total weight of the lotion formulation” (Krzysik ‘934, col. 9, ll. 35-39).

11. Krzysik ‘934 teaches that suitable waxes include “animal, vegetable, mineral or silicone based waxes which may be natural or synthetic such as, for example, bayberry wax, beeswax, C30 alkyl dimethicone, candelilla wax, carnauba, ceresin” (Krzysik ‘934, col. 10, ll. 20-23). These all fall within the list of structurants in instant dependent claim 13 (*see* Claim 13).

12. Krzysik '934 teaches viscosity enhancers and notes that "a particularly well suited viscosity enhancer is an ethylene/vinyl acetate copolymer" (Krzysik '934, col. 10, ll. 63-64).

*Discussion of 35 U.S.C. § 103(a) rejection over Chung and Krzysik '934*

Chung teaches a sunscreen ointment with an emollient and a rheology enhancer (FF 1-4). Krzysik '934 teaches lotions with emollients, structurants, and viscosity enhancers, which fall within the claimed ranges in instant claim 1 (FF 9-12).

The Examiner notes that a styrene/ethylene/propylene diblock copolymer can be mixed with isododecane based on example 2 of Chung (Chung 4, ll. 25-55). The Examiner recognizes that this differs from the triblock copolymers claimed and the Examiner argues that "Appellants have not sufficiently set forth any patentable distinction that accrues from the instant triblock copolymers claimed" (Ans. 12-13).

However, claim 1 requires that the rheology enhancer in the claimed composition be one of several recited compounds or combinations of compounds. Claim 1 requires that when the rheology enhancer includes isododecane and ethylene/propylene/styrene copolymers, it also includes butylene/ethylene/styrene copolymers. The Examiner has not adequately explained how the teaching of an ethylene/vinyl acetate copolymer by Krzysik '934 would have suggested the required butylene/ethylene/styrene copolymers to a person of ordinary skill in the art.

Since the Examiner has failed to make this showing, there is no prima facie case of obviousness. *See In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993)( "In rejecting claims under 35 U.S.C. § 103, the examiner bears the

initial burden of presenting a prima facie case of obviousness. Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant.”)

We reverse the rejection of claims 1, 3, 5-13, 15-23 and 25 as obvious over Chung and Krzysik ‘934.

C. 35 U.S.C. § 103(a) rejection over Chung and Krzysik ‘581

Appellants argue that “no where in the '581 reference is it taught or suggested to use the rheology enhancers of claim 1 in the lipid-enriched hydrophobic composition of '581” (App. Br. 21). Appellants also contend that the skilled artisan “reading the '581 reference, would not, and could not, reasonably use the styrene-ethylene-propylene copolymers of the '144 composition, which cause the composition to be transfer proof, in the lotion of '581, which desirably can be transferred from the absorbent article to the skin to improve skin health” (App. Br. 21-22).

The Examiner argues that “[n]o significant patentable distinction has been observed in Applicant's use of the ethylene/propylene/styrene copolymers and butylene/ethylene/styrene copolymers when used with isododecane” (Ans. 16). The Examiner also contends that “the claims, as presently recited, are silent with regards to the particular properties (easy transfer of ointment) argued by Appellant” (Ans. 17).

In view of these apparently conflicting positions, we frame the obviousness issue before us as follows:

Would an ordinary artisan have reasonably combined the cosmetic components of Krzysik ‘581 with the cosmetic composition of Chung and would that combination have resulted in the composition of claim 1?

*Findings of Fact*

13. Krzysik '581 discloses lotion formulations comprising emollients, structurants such as wax and viscosity enhancers (*see* Krzysik '581, col. 3, ll. 55-65).

14. Krzysik '581 teaches that the "wax used in the composition may include ozokerite, cerasin or microcrystalline wax" (Krzysik '581, col. 4, ll. 15-17). Krzysik '581 teaches additional waxes (*see* Krzysik '581, col. 6, ll. 12-14).

15. Krzysik '581 teaches that the "viscosity enhancer used in the composition may include ethylene/vinyl acetate copolymer" (Krzysik '581, col. 4, ll. 17-18).

16. Krzysik '581 teaches emollients in ranges from 5 to 95 weight percent (*see* Krzysik '581, col. 3, l. 63).

*Discussion of 35 U.S.C. § 103(a) rejection over Chung and Krzysik '581*

Chung teaches a sunscreen ointment with an emollient and a rheology enhancer (FF 1-4). Krzysik '581 teaches lotions with emollients, structurants, and viscosity enhancers, which fall within the claimed ranges in instant claim 1 (FF 13-16).

As discussed *supra*, the Examiner has not adequately explained how the references would have suggested a combination of isododecane, ethylene/propylene/styrene copolymers, and butylene/ethylene/styrene copolymers, or any of the other specific rheology enhancers required by claim 1. *See In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993) ("In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. Only if that burden is met,

does the burden of coming forward with evidence or argument shift to the applicant.”)

The Examiner’s comment that “Appellants have not sufficiently demonstrated how their formulation would provide for unexpected or superior results over that of the teachings of the art of record” (Ans. 16) improperly places the burden of the prima facie case on Appellants. In this context, there is no prima facie case of obviousness because the prior art does not teach each element of the claim, specifically neither Chung nor Krzysik ‘581 teach any of the specific rheology enhancers.

We reverse the rejection of claims 1, 3, 5-6, 10-13, and 19-22 as obvious over Chung and Krzysik ‘581.

#### CONCLUSION

In summary, we affirm the rejection of claim 1 under 35 U.S.C. § 103(a) over Chung, Morrison, and Grollier. Pursuant to 37 C.F.R. § 41.37(c)(1)(vii)(2006), we also affirm the rejections of claims 3, 5-13, 15-18, 21, and 27 as these claims were not argued separately. We reverse the rejection of claims 1, 3, 5-13, 15-23 and 25 as obvious over Chung and Krzysik ‘934. We reverse the rejection of claims 1, 3, 5-6, 10-13, and 19-22 as obvious over Chung and Krzysik ‘581. We note that claims 19, 20, 22, 23, and 25 are not subject to any rejection.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv)(2006).

AFFIRMED-IN-PART

Appeal 2008-3449  
Application 10/659,967

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